



# Public Notice

**U.S. Army Corps  
Of Engineers  
Galveston District** Permit Application No: \_\_\_\_\_ 23426  
Date Issued: \_\_\_\_\_ 30 August 2004  
Comments Due: \_\_\_\_\_ 30 September 2004

**U.S. ARMY CORPS OF ENGINEERS, GALVESTON DISTRICT  
AND  
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**PURPOSE OF PUBLIC NOTICE:** To inform you of a proposal for work in which you might be interested. It is also to solicit your comments and information to better enable us to make a reasonable decision on factors affecting the public interest. We hope you will participate in this process.

**AUTHORITY:** This application will be reviewed pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act.

**APPLICANT:** Cheniere Energy, Inc.  
717 Texas Street, Suite 3100  
Houston, Texas 77002-2760

**AGENT:** PBS&J  
1880 South Dairy Ashford Street, Suite 300  
Houston, Texas 77077-4746  
Telephone: 281-493-1047  
POC: Joey Mahmoud

**LOCATION:** The project is located south of State Highway 82, just east of the Sabine Pass Bridge. The liquefied natural gas (LNG) terminal facility can be located on the U.S.G.S. quadrangle map entitled: West of Johnsons Bayou, Louisiana. Approximate UTM Coordinates in NAD 27 (meters): Zone 15; Easting: 415457; Northing: 3291241. The proposed pipeline begins at the terminal and roughly parallels State Highway 82 east to the City of Johnson Bayou, Louisiana, located on the U.S.G.S. quadrangle map entitled: Johnsons Bayou, Louisiana. Approximate UTM Coordinates in NAD 27 (meters): Zone 15; Easting: 437793; Northing: 3292808. The entire project is located in Cameron Parish, Louisiana.

**PROJECT DESCRIPTION:** The applicant proposes to construct, operate, and maintain structures and equipment necessary for an LNG receiving and transportation facility. The project is designed for the importation, storage, and delivery of foreign-source LNG to natural gas markets. Large LNG ships (generally 900-1,100 feet in length) will off-load LNG at a new marine terminal to be constructed in Sabine Pass. The terminal will have the capability of unloading up to 300 ships per year. LNG will be transferred from the ships into cryogenic service storage tanks where it will be stored in a liquefied state at atmospheric pressure. To condition the LNG for the intrastate pipeline market, high-pressure submerged combustion vaporizers will vaporize the LNG. Natural gas will be sent out of the terminal facilities at a rate of up to 2.6 billion cubic feet per day (bcf/d) via 16 miles of 42-inch-diameter natural gas send-out pipeline. The send-out pipeline will transport the natural gas to two metering stations, one at the Natural Gas Pipeline Company of America (milepost 1.2) and one at the interconnection with the existing pipelines at Johnsons Bayou (milepost 16.0).

The project will consist of four (4) primary components:

- Construction dock facility
- Marine terminal and LNG transfer lines
- LNG storage and vaporization facility
- Natural gas send out pipeline, metering stations, and associated appurtenances

In order to construct the LNG facility, an area needs to be created in order to bring in the materials necessary for the construction of the facility itself. A construction dock will be created in an existing man-made inlet along the Sabine Pass shoreline. The construction dock will be dredged by mechanical or hydraulic means to a depth of 13 feet below NAVD'88. The material will be placed within the limits of the proposed berth area. When the facilities berthing area is hydraulically dredged, the material from the construction dock will also be removed and placed in the beneficial use dredge material placement area off of Louisiana point in the Gulf of Mexico. The dredging associated with the construction dock will remove 69,000 cubic yards of material from a 5.2-acre area (5.0 acres of open water habitat and 0.2 acre of uplands).

The proposed terminal facility will be located on approximately 236.6 acres of a 568-acre site on the eastern shore of the Sabine Pass Channel and east of the town of Sabine Pass, Texas, which Cheniere Sabine has acquired through a long-term lease. The new marine basin will consist of two protected ship berths, each equipped with mooring systems and associated facilities, a maneuvering basin to turn and move the LNG ships into the berths, as well as berthing facilities for three tugboats and two line-handling boats. The new marine basin will be connected to, but separated from, the main ship traffic in the Sabine Pass Channel. The berthing and maneuvering areas will be dredged to a depth of 45 feet below mean low tide plus 2 feet of over-dredge. The new side slopes of the berthing area will be at 3:1 slope and portions of the newly created shoreline will be armored with articulated block mats or other slope stabilization materials.

The applicant proposes to shorten the north side of the anchorage area currently located in Sabine Pass adjacent to the proposed facility. The proposed shortening of the anchorage area needs the approval of the Corps of Engineers and the United States Coast Guard. This shortening of the anchorage area will prevent ships from anchoring in the approach to the LNG facility and potentially disrupt facility operations.

Construction of the berthing and maneuvering areas will require the dredging of approximately 4.5 million cubic yards of material, plus the 69,000 cubic yards from the construction dock area, within a 72.6-acre area of uplands and open water. The material will be hydraulically dredged and placed along the shoreline of Louisiana Point as a beneficial use placement area approximately 3.8 miles south of the LNG terminal and directly adjacent to the Sabine Pass Jetty in the Gulf of Mexico. Maintenance dredging of the berth and construction dock will be needed approximately every 4-7 years. The estimated removal of 185,000 cubic yards of material will be dredged and deposited in the beneficial use dredged material placement area just off Louisiana Point.

LNG will be transported from the ships to the holding tanks by onboard ship pumps. Two 30-inch transfer lines ranging in length from 2,700 to 5,800 feet, depending on the berth and storage tank selected, will transport the LNG. Three 20-inch-diameter marine unloading arms will be installed for liquid delivery to the storage tanks, and one 20-inch-diameter arm will provide vapor return to the ship.

The LNG will be stored in three metal, double wall, single containment, storage tanks with a secondary impoundment. The insulated tanks are designed to store a nominal working volume of 1,006,400 barrels of LNG at a normal operating temperature of -260 degrees Fahrenheit and an operating pressure range from 1.0 to 2.2 pounds per square inch gauge. Precast piles will support the LNG tank foundations. The diameter of the outer wall will be about 259 feet and the height of the domed roof will be about 185 feet. A low earthen dike will surround each tank forming the required impounding area size to contain 110 percent of the volume of the tank. The LNG tank impoundment area will be enclosed by dikes that will be 30 feet above mean sea level (MSL), with the sloped impoundment floor at elevations from 15 to 11 feet above MSL.

LNG from the storage tanks must be pressurized to pipeline pressure and vaporized so that it can be sent out of the terminal facilities. Nine in-tank pumps, three in each tank, will deliver the LNG to the high-pressure send-out pumps via the boil off gas (BOG) condenser to each LNG vaporizer. The submerged combustion vaporizer (SCV) will vaporize the LNG using heat generated from the burning of BOG or vaporized gas. Each high-pressure send out pump and SCV creates a "vaporization train". The facility would have 16 vaporization trains, 15 would routinely be used and one would be used as a spare. The LNG facility will generate water from the combustion of natural gas in the SCV's. Depending on operational conditions, the 16 SCV's could produce up to 320 gallons per minute of fresh water. The water will be slightly acidic from the dissolved CO<sub>2</sub>. The water will be buffered using sodium carbonate and then released into the firewater pond. Overflows of the firewater pond will be channelized and outfall into Sabine Pass. The discharge would have a temperature of approximately 77 degrees Fahrenheit and a pH of 6.5 to 7.5.

The natural gas send-out pipeline will originate at the storage and vaporization facility and traverse a distance of approximately 16 miles to its terminus at the gas meter station near Johnsons Bayou, Louisiana. The natural gas pipeline will be a 42-inch diameter pipe. The proposed pipeline route will parallel Highway 82 or utility line rights-of-way for approximately 14.3 miles, or approximately 89 percent of the total pipeline length.

**IMPACTS TO JURISDICTIONAL WETLANDS AND WATERS:** The LNG terminal will impact approximately 56.46 acres of wetlands, of which 47.73 acres will be permanently impacted and 8.73 acres will be temporarily impacted. The applicant will restore the temporarily impacted wetlands as well as mitigate for the temporary impacts due to the temporal impacts to the wetland areas. The breakdown of impacts to wetlands is as follows:

- 30.29 acres of wetlands in a dredge material placement area that is no longer being used will be permanently impacted by fill material for the construction of the LNG storage tanks.
- 7.45 acres of non-tidal brackish marsh within the project area, of which 2.41 acres will be permanent.
- 18.72 acres of tidal brackish marsh/mud flat, considered essential fish habitat, will be impacted and 15.03 acres will be permanent.

The LNG terminal berthing area will impact 31.2 acres of existing open water areas and create 35.1 acres of new open water area. The construction dock area will impact 5.0 acres of existing open water areas and create 0.2 acres of new open water area.

The LNG send-out pipeline will impact approximately 104.48 acres of wetlands, of which 39.36 acres occur within the proposed permanent easement. All the impacts associated with the proposed pipeline will be temporary, except for the permanent impacts to 0.08 acre of wetlands, the main line valve at milepost 9.3, as well as the permanent conversion of 0.17 acre of low-quality forested wetlands to non-forested wetlands within the proposed pipeline easement.

**LNG TERMINAL MITIGATION:** The applicant proposes to mitigate for the permanent wetland and open water impacts, as well as the temporarily impacted wetlands, by enhancing and preserving existing wetlands or creating wetlands and open water areas in the project area. The impacted wetlands located in the dredge material placement area (DMPA) will be mitigated for at a 3:1 enhancement to impact ratio. The applicant will enhance 90.87 acres of wetlands within wetland mitigation area C, to mitigate for the 30.29 acres of wetlands within the DMPA. The non-tidal wetlands impacted at the facility location will be mitigated for at a 3:1 enhancement to impact ratio. The applicant will enhance 22.35 acres inside wetland mitigation area C for the impacts to the 7.45 acres of non-tidal wetlands within the project area. Overall, the applicant will enhance 113.22 acres of wetlands within wetland area C to mitigate for the non-tidal wetlands impacted by the proposed terminal facility.

For the open water impacts due to facility construction, the applicant proposed to mitigate at a 0.25:1 creation to impact ratio. With 71.5 acres of open water habitat impacted and 35.3 acres of open water habitat created, the applicant will create 9.05 acres of open water channels within mitigation area A or B.

The applicant proposes to mitigate for the impacted tidal wetlands at the terminal facility at a 1:1 impact to creation ratio as well as 0.08 acres for the permanent impacts of the pipeline main line valve. The applicant will create 18.80 acres of tidal wetlands adjacent to Sabine Pass. In wetland area A or B, the applicant will create a 28-acre site that includes both the wetland creation as well as the open water channels.

**PIPELINE MITIGATION:** The applicant proposes to restore the pipeline corridor to pre-construction elevations and allow the area to naturally revegetate. The permanently impacted 0.08 acre of wetlands due to the main line valve will be added to the mitigation acreage created at the terminal facility site. The impacted forested wetlands are dominated by Chinese tallow-trees (*Sapium sebiferum*), an invasive species, will not be restored upon completion of the pipeline project. The applicant will ensure the impacted wetlands are restored to pre-construction elevations upon completion of pipeline installation and submit photographs and reports according to the proposed mitigation plan.

A project location map and overall plans are attached in 10 sheets. The entire project and pipeline alignment, in 52 sheets, and the 13-page mitigation plan, Attachment 1, are available on the USACE website at [www.swg.usace.army.mil/reg](http://www.swg.usace.army.mil/reg). You may also obtain a hard copy of the project plans upon written request to the Regulatory Specialist cited on page 8 of this notice.

**NOTES:** This public notice is being issued based on information furnished by the applicant. This information has not been verified.

A preliminary review of this application indicates that an Environmental Impact Statement (EIS) is required. The Federal Energy Regulatory Commission (FERC) is the Federal agency responsible for authorizing applications to construct and operate LNG import facilities. As such, the FERC is the lead Federal agency for the preparation of an EIS in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40, Code of Federal Regulations (CFR) 1500-1508) and the FERC's regulations implementing NEPA (18 CFR 380). The USACE, U.S. Fish and Wildlife Service, and the U.S. Coast Guard are cooperating agencies for the EIS. A cooperating Federal agency has jurisdiction by law or special expertise with respect to environmental impacts involved with the proposal.

Additional information about the project is available from the FERC Office of external Affairs, at **1-866-208-FERC** or on the FERC Internet website ([www.ferc.gov](http://www.ferc.gov)) using the eLibrary link. Click on the eLibrary link, click on “General Search” and enter docket number (CP04-47) for the terminal facility and docket number (CP04-38, CP04-39, and CP04-40) for the pipeline portion of the project. Be sure to select the appropriate date range. The Draft EIS was issued on 12 August 2004. For assistance with eLibrary, the eLibrary help line can be reached at 1-866-208-3676 or at [FERCONLINESUPPORT@FERC.GOV](mailto:FERCONLINESUPPORT@FERC.GOV). The eLibrary link on the FERC Internet website also provides access to texts of formal documents issued by the FERC, such as orders, notices, and rulemakings.

Our evaluation will also follow the guidelines published by the U.S. Environmental Protection Agency pursuant to Section 404 (b)(1) of the Clean Water Act (CWA).

**OTHER AGENCY AUTHORIZATIONS:** State of Louisiana Coastal Zone Management Consistency is also required.

**STATE WATER QUALITY CERTIFICATION:** Louisiana Department of Environmental Quality (LDEQ) water quality certification is required. Concurrent with processing of this application, the LDEQ is reviewing this application under Section 401 of the Clean Water Act and in accordance with LRS 30:2074A(3) to determine if the work would comply with State water quality standards and other applicable provisions of the Clean Water Act. By virtue of an agreement between the U.S. Army Corps of Engineers and the LDEQ, this public notice is also issued for the purpose of advising all known interested persons that there is pending before the LDEQ a decision on water quality certification under such act. Comments concerning this application should be filed within 30 days from the date of this notice with the Office of Environmental Services using the above permit application number as reference. Comments should be sent to: Louisiana Department of Environmental Quality, Office of Environmental Services, P.O. Box 82135, Baton Rouge, LA 70884-2135. Additional information is on file with LDEQ, and may be inspected at any time between 8:00 A.M. and 4:30 P.M. weekdays. Copies may be obtained upon payment of cost of printing. A final decision on this application will be made within 60 days after the date of this notice. The LDEQ may conduct a public hearing to consider all comments concerning water quality if requested in writing. A request for a public hearing must contain the following information: the name, mailing address, application number, or other recognizable reference to the application; a brief description of the interest of the requester, or of persons represented by the requester; and a brief description of how the application, if granted, would adversely affect such interest.

**NATIONAL REGISTER OF HISTORIC PLACES:** The staff archaeologist has no information regarding the potential presence of properties eligible for inclusion in the National Register of Historic Places within the project area.

The applicant has conducted a Phase I Cultural Resources Survey of the terminal and pipeline project area. There does not appear to be any impacts to potential or existing properties eligible for inclusion in the National Register of Historic Places. Further investigation for the presence of potentially eligible historic properties may be justified if recommended by Louisiana State Historical Preservation Officer.

**THREATENED AND ENDANGERED SPECIES:** Preliminary indications are that no known threatened and/or endangered species or their critical habitat will be affected by the proposed work.

**ESSENTIAL FISH HABITAT:** This notice initiates the Essential Fish Habitat consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. Our initial determination is that the proposed action would not have a substantial adverse impact on Essential Fish Habitat or Federally managed fisheries in the Gulf of Mexico. Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

**PUBLIC INTEREST REVIEW FACTORS:** This application will be reviewed in accordance with 33 CFR 320-330, the Regulatory Programs of the Corps of Engineers, and other pertinent laws, regulations and executive orders. The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors, which may be relevant to the proposal, will be considered: among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs and, in general, the needs and welfare of the people.

**SOLICITATION OF COMMENTS:** The Corps of Engineers is soliciting comments from the public, Federal, State, and local agencies and officials, Indian tribes, and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Impact Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

This public notice is being distributed to all known interested persons in order to assist in developing facts upon which a decision by the Corps of Engineers may be based. For accuracy and completeness of the record, all data in support of or in opposition to the proposed work should be submitted in writing setting forth sufficient detail to furnish a clear understanding of the reasons for support or opposition.

**PUBLIC MEETING:** The Federal Energy Regulatory Commission (FERC), with the Corps of Engineers as a cooperating agency, has scheduled a public comment meeting to be conducted in the project area. The location and time for this meeting is listed below:

21 September 2004  
7:00 P.M.

Johnsons Bayou Community Center  
5556 Gulf Beach Highway  
Johnsons Bayou, Louisiana 70631  
Telephone: 337-569-2815

This meeting will be posted on the FERC calendar located at <http://www.ferc.gov.EventCalendar/EventsList.aspx> along with other related information. Interested groups and individuals are encouraged to attend the present oral comments on the proposed LNG project. Transcripts of the meeting will be prepared.

**CLOSE OF COMMENT PERIOD:** All comments pertaining to this Public Notice must reach this office on or before **30 September 2004**. Extensions of the comment period may be granted for valid reasons provided a written request is received by the limiting date. **If no comments are received by that date, it will be considered that there are no objections**. Comments and requests for additional information should be submitted to:

Douglas P. Boren  
Regulatory Branch, CESWG-PE-RE  
U.S. Army Corps of Engineers  
P.O. Box 1229  
Galveston, Texas 77553-1229  
409-766-3949 Phone  
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DISTRICT ENGINEER  
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